AMENDMENTS TO THE CLAIMS

1. (PREVIOUSLY PRESENTED) A solid-state image pick-up device comprising:

a semiconductor substrate,

a plurality of light receiving sensor sections on the semiconductor substrate,

a plurality of vertical transfer path formed close to each of the light receiving sensor sections, and

a channel stopper provided between the adjacent vertical transfer paths and formed by an insulating layer having a trench structure, wherein a conductive substance to which a predetermined voltage is applied is buried in the insulating layer and an oxide film is formed between the conductive substance and the adjacent vertical transfer paths.

2. (CURRENTLY AMENDED) A solid-state image pick-up device comprising: ~~The solid-state image pick-up device according to claim 1,~~

a semiconductor substrate,

a plurality of light receiving sensor sections on the semiconductor substrate,

a plurality of vertical transfer path formed close to each of the light receiving sensor sections, and

a channel stopper provided between the adjacent vertical transfer paths and formed by an insulating layer having a trench structure, wherein a conductive substance to which a predetermined voltage is applied is buried in the insulating layer and an oxide film is formed between the conductive substance and the adjacent vertical transfer paths; wherein the predetermined voltage is a negative voltage if a signal charge is an electron, and is a positive voltage if the signal charge is a hole.

3. (CURRENTLY AMENDED) A solid-state image pick-up device comprising: ~~The solid-state image pick-up device according to claim 1,~~

a semiconductor substrate,

a plurality of light receiving sensor sections on the semiconductor substrate,

a plurality of vertical transfer path formed close to each of the light receiving sensor sections, and

a channel stopper provided between the adjacent vertical transfer paths and formed by an insulating layer having a trench structure, wherein a

conductive substance to which a predetermined voltage is applied is buried in the insulating layer and an oxide film is formed between the conductive substance and the adjacent vertical transfer paths; wherein the predetermined voltage is a pulse having an opposite phase to that of a read pulse to be applied to a transfer electrode of the vertical transfer path.

4. (CURRENTLY AMENDED) A solid-state image pick-up device comprising: ~~The solid-state image pick-up device according to claim 1,~~

a semiconductor substrate,

a plurality of light receiving sensor sections on the semiconductor substrate,

a plurality of vertical transfer path formed close to each of the light receiving sensor sections, and

a channel stopper provided between the adjacent vertical transfer paths and formed by an insulating layer having a trench structure, wherein a conductive substance to which a predetermined voltage is applied is buried in the insulating layer and an oxide film is formed between the conductive substance and the adjacent vertical transfer paths; wherein a diffusion region

having an opposite conductivity type to that of the light receiving sensor section is formed in a lowermost part of the channel stopper.

5. (ORIGINAL) The solid-state image pick-up device according to claim 4, wherein the conductive substance is also doped with a doped impurity in the diffusion region, and the conductive substance and the diffusion region are thus set in a connecting state.

6. (PREVIOUSLY PRESENTED) The solid-state image pick-up device according to claim 1, wherein the conductive substance is a polycrystalline silicon.

7. (PREVIOUSLY PRESENTED) The solid-state image pick-up device according to claim 3, wherein the conductive substance is a polycrystalline silicon.

8. (PREVIOUSLY PRESENTED) The solid-state image pick-up device according to claim 4, wherein the conductive substance is a polycrystalline silicon.

9. (PREVIOUSLY PRESENTED) The solid-state image pick-up device according to claim 5, wherein the conductive substance is a polycrystalline silicon.

10. (CURRENTLY AMENDED) A solid-state image pick-up device comprising: ~~The solid-state image pick-up device according to claim 1,~~

a semiconductor substrate,

a plurality of light receiving sensor sections on the semiconductor substrate,

a plurality of vertical transfer path formed close to each of the light receiving sensor sections, and

a channel stopper provided between the adjacent vertical transfer paths and formed by an insulating layer having a trench structure, wherein a conductive substance to which a predetermined voltage is applied is buried in the insulating layer and an oxide film is formed between the conductive substance and the adjacent vertical transfer paths; wherein a coefficient of thermal expansion of the conductive substance is approximately equal to a coefficient of thermal expansion of a silicon substrate forming said semiconductor substrate.

11. (PREVIOUSLY PRESENTED) The solid-state image pick-up device according to claim 10, wherein said conductive substance is a polycrystalline silicon.

12. (NEW) The solid-state image pick-up device according to claim 2, wherein the conductive substance is a polycrystalline silicon.